REMARKS

Claims 95-118 are pending in this application. Claims 95-105 stand rejected, while claims 106-118 are withdrawn from consideration. Applicant has cancelled claim 97. Applicant acknowledges with appreciation the withdrawal of certain previous rejections and objections. Applicant has amended claim 95 and the specification, and the amendments do not introduce any new matter.

Telephonic Interview on June 19, 2006

Applicant thanks Examiners Daniel Kolker and Robert Hayes for conducting the telephonic interview on June 19, 2006 with Applicant's attorney, John Quisel. According to the discussions at the interview, Applicant has amended the specification to include sequence ID numbers and herewith submits the respective sequence listing. Further based on the interview, Applicant herewith submits a declaration by the inventor, Dr. Anton Wellstein, under 37 CFR 1.132.

Rejections of Claims 95-105 under 35 USC § 112, First Paragraph

The Examiner has rejected claims 95-105 for allegedly failing the enablement and written description requirements.

Both enablement and written description rejections appear to rest on the teachings of Zhang et al. (1999) PNAS 96:6734-6738, which was cited by the Examiner as supporting the position that "the art recognizes that molecules anywhere between 40 and 168 amino acids long are PTN." Applicant respectfully traverses. The PTN molecules of different sizes as described in Zhang et al. appear to be of murine origin, whereas claim 95 and its dependent claims require a human PTN. Applicant maintains that one of ordinary skilled in the art would view a human PTN as distinct from the various murine forms described in Zhang et al. and would not have to resort to undue experimentation to test whether the claimed polypeptides bind to a human PTN. Similarly, Applicant maintains that claim 95 and its dependent claims, by reciting a human PTN, comply with written description requirement, because the other forms of PTN as taught by Zhang et al. are

clearly not human. Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Rejection of Claims 95-105 under 35 USC § 112, Second Paragraph

The Examiner has rejected claims 95-105 for allegedly being indefinite. Applicant has amended claim 95 to recite particular nucleic acid and amino acid sequences that are found under GenBank Accession No. U66559.

Further, with respect to the term "test substance" in claim 105, Applicant has amended claim 105 and submits that the amendment overcomes the rejection.

Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Rejection of Claims 95-99, 101 and 104 under 35 USC § 102(b) (Aigner et al.)

The Examiner has rejected claims 95-99, 101 and 104 under 35 U.S.C. 102(b) as allegedly being anticipated by the Aigner et al. abstract.

Applicant respectfully reminds the Examiner that inherency is not a matter of probability. For example, in *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995), the Federal Circuit upheld the district court's finding of no inherent anticipation of the claimed polymorph by a prior art manufacturing process, because the prior art manufacturing process does not always yield the claimed polymorph. The district court further states: "In order for a claim to be inherent in the prior art it is not sufficient that a person following the disclosure sometimes obtain the result set forth in the claim, it must invariably happen." *Glaxo Inc. v. Novopharm Ltd.*, 830 F. Supp. 871, 874 (E.D.N.C. 1993).

As demonstrated by Dr. Anton Wellstein's declaration submitted herewith under 37 CFR 1.132, the bare teachings of Aigner et al. are far from certain to lead one of ordinary skill in the art to inevitably arrive at the claimed polypeptides and compositions. First, for the screening process, the abstract does not disclose anything more than using recombinant PTN as a bait to screen a phage-display library of human fetal brain cDNA library. The abstract does not disclose any information with regards to how to prepare the bait PTN to ensure that biologically active PTN is used in the screening, how much bait PTN to use, which phage-display library to use, the screening

conditions (e.g., blocking, incubation, or wash), or the parameters to use when searching against sequence databases with the screening result (which is typically only a small fragment of a full-length cDNA). As discussed by Dr. Wellstein, all of those are variables in the phage-display screening process, and without disclosing any details, it is far from certain that the screening process briefly outlined in the Aigner et al. abstract would lead one or ordinary skill in the art to ALK. Indeed, as Exhibit A attached to Dr. Wellstein's declaration shows, other skilled artisans, even when provided with a full manuscript that described in great details the screening process and further studies specifically involving ALK, did not appreciate the finding by researchers in Dr. Wellstein's group that ALK is a pleiotrophin receptor.

Second, the abstract mentions an extracellular fragment of an orphan tyrosine kinase receptor as a PTN receptor, and further identifies the receptor as one that expresses in breast cancer cell lines and tumors, and tumors of the CNS. As Dr. Wellstein stated in his declaration, the disclosure of the abstract could have led a skilled artisan to other orphan tyrosine kinase receptors, such as for example, HER2, as they share the characteristics of the receptor disclosed by the abstract.

Following *Glaxo* above and abundant case law related to inherent anticipation, the prior art cannot inherently anticipate the claimed inventions when it is far from certain that a person of ordinary skill in the art following the prior art disclosure would obtain the result set forth in the claims. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

Rejection of Claims 95-105 under 35 USC § 102(b) (Morris et al.)

Claims 95-98 stand rejected as allegedly being anticipated by the Morris et al. patent. In particular, the Examiner cites column 26, lines 62-66 of Morris et al. as stating that "the extracellular domain of human ALK comprises the first 1030 residues of the peptide, including the signal sequence." Applicant respectfully traverses this characterization of Morris et al. The cited part of Morris et al. states: "Sequences 5' from this region encode a 1,030 amino acid *putative* extracellular domain containing an amino-terminal 26 amino acid hydrophobic region consistent with known signal peptide sequences" (emphasis added). Thus, Morris et al. teach only that a putative extracellular domain includes the 26-amino acid signal peptide. Figure 3B and the

corresponding figure legend further illustrate the putative signal peptide and other domains, and set out the extracellular domain and the signal peptide as separate fragments. In those parts of Morris et al. that discuss the extracellular domain without the "putative" modifier, the reference clearly excludes the signal peptide from the extracellular domain. Accordingly, the "extracellular domain" recited in claim 5 of Morris et al. is distinct from the "putative extracellular domain," and the former is the full-length extracellular domain which does not include the signal peptide. Therefore, Applicant respectfully submits that Morris et al. do not anticipate the claimed inventions.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that the pending claims are in condition for allowance. Early and favorable reconsideration is respectfully solicited. The Examiner may address any questions raised by this submission to the undersigned at 617-951-7000. Please charge any further fees or credit any overpayments to our Deposit Account No. 18-1945 from which the undersigned is authorized to draw, under order no. 102728-P01-004.

Dated: August 8, 2006

Respectfully submitted,

By _____

Xuqiong Wu, Ph.D.
Registration No.: 55,745
FISH & NEAVE IP GROUP
ROPES & GRAY LLP
One International Place
Boston, Massachusetts 02110-2624
(617) 951-7000
(617) 951-7050 (Fax)
Attorneys/Agents For Applicant